

REMARKS

In response to the Official Action mailed June 18, 2003, Applicants amend their application and request reconsideration. In this Amendment, no claims are cancelled and claims 21-25 are added so that claims 1-25 are now pending.

The newly added claims are supported by the embodiments of the invention depicted in Figures 19 and 28-31 (claims 21-23) and Figure 22 (claims 24 and 25).

The invention concerns an irregular pattern reader. In the embodiment of the invention described in the patent application, the irregular pattern is supplied by a finger. The claimed irregular pattern reader provides an image of that pattern, e.g., a finger, to an image pick-up device. That image pick-up device may supply the image to other apparatus for further processing. Irregular pattern readers have been known in the prior art and the Examiner has cited examples of such readers. However, the present invention is directed to making the reader compact, especially in a direction extending perpendicular to a surface on which a subject, for example, a finger, is placed for the forming of an image. In the embodiment of the invention illustrated in Figure 1, that direction is vertical.

The object of the invention is achieved by including in the irregular pattern reader a prism having an incident surface upon which light from a light source is incident. The light from that light source is substantially parallel to the detection surface of the prism upon which the subject is placed. The light is parallel to that detection surface where the light is incident on the incident surface of the prism. This feature of the invention is commonly shown in all of the embodiments illustrated in the patent application. This feature is not present in the prior art structure illustrated in Figure 34 of the patent application. There, the incident light that is reflected from the finger 105 is not parallel to the detecting surface 103 of the prism but forms an angle that appears to be about 45° with respect to that detection surface. As a result, the apparatus is substantially larger in the dimension that is vertical in Figure 34 than the embodiments of the invention illustrated in other figures of the patent application, particularly the embodiment illustrated in Figure 1 of the patent application.

In the foregoing amendment, the particular arrangement just described, namely the parallel relationship of the incident light beam, where incident on the prism, and the detection surface of the prism, is clearly described. In addition, all other examined claims have been reviewed and amended, where appropriate, for clarity and to conform to the amended form of claim 1, the disclosure, and the other pending claims.

Claims 1-3 and 6-9 were rejected for obviousness type double patenting over claims 1-7 of U.S. Patent 6,414,749 to Okamoto et al. As noted in the Official Action, this rejection can be overcome by the filing of a Terminal Disclaimer. Because no claims have yet been indicated as allowable, Applicants, at this time, are not responding to the rejection or filing a Terminal Disclaimer. However, Applicants will consider the filing of a Terminal Disclaimer upon the indication of allowable subject matter in the pending claims if the double patenting rejection is repeated as to claims indicated as allowable and the double patenting rejection is proper.

Claims 1-3 and 6-9 were rejected as anticipated by Higuchi et al. (U.S. Patent 5,146,102, hereinafter Higuchi). This rejection is respectfully traversed.

In making the rejection of the sole pending independent claim and six of the examined dependent claims, the Examiner expressly cited Figure 1 of Higuchi. Careful study of that figure, particularly in combination with Figure 3 of Higuchi, as well as all of the other figures of that patent, demonstrates that Higuchi cannot anticipate amended claim 1 or any other claim now pending in the patent application. Figure 3 of Higuchi is the clearest figure with regard to the claimed structure. It is sufficient to point out that in the apparatus of Higuchi's Figure 3, because of the presence of the mirror 17a, the light incident on the incident surface of the prism 11 is not parallel, at that point of incidence, to the surface of the prism upon which a finger 12 is placed for the forming of an image. Since anticipation requires that a prior art publication disclose every element of a claimed invention, Higuchi clearly cannot anticipate any claim now pending. Therefore, the rejection of examined claims 1-3 and 6-9 should be withdrawn.

Claims 4, 5, and 10-12 were rejected as unpatentable over Higuchi in view of Metz et al. (U.S. Patent 5,974,152, hereinafter Metz). This rejection is respectfully traversed.

It is apparent, upon studying Metz, that Metz was cited with respect to the limitations of the rejected dependent claims. No apparatus within Metz provides a prism upon which a finger is placed for forming an image and in which the illuminating light is incident upon a face of that prism so that the light is parallel, at the point of incidence, to the surface of the prism that receives the subject of which an image is formed. Therefore, since neither Higuchi nor Metz includes an important feature of the claimed structure, the rejection of examined claims 4, 5, and 10-12 cannot be properly maintained.

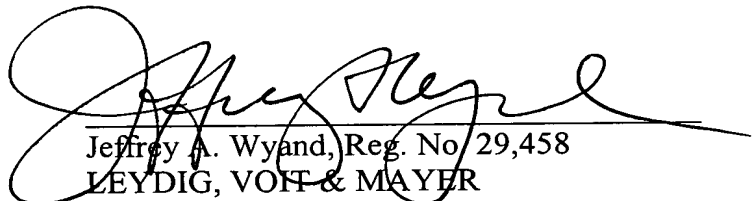
Claims 13-20 were rejected as unpatentable over Higuchi in view of Metz and further in view of Hebert (U.S. Patent 5,596,454). This rejection is respectfully traversed.

In re Appln. of OKAMOTO et al.
Application No. 09/621,553

Hebert, like Higuchi and Metz, does not disclose the parallel arrangement between the illuminating light where incident on the prism and the surface of the prism upon which a subject, such as a finger, is placed for the capture of an image. Therefore, no combination of Higuchi, Metz, and Hebert can include all of the elements of claim 1, much less the elements of the rejected dependent claims 13-20. Accordingly, *prima facie* obviousness cannot be established with respect to any claim based upon that combination of references. The rejection should be withdrawn.

Reconsideration and allowance of all pending claims, namely claims 1-25 should be allowed.

Respectfully submitted,



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